

## ABSTRACT OF THE DISCLOSURE

An optical cross-connect switch is provided for routing optical data signals in an optical transport network. The optical cross-connect switch includes a plurality of signal splitters, where each signal splitter receives an optical multiplexed signal therein and operates to partition the optical multiplexed signal into a plurality of optical multiplexed signals; a plurality of wavelength selective devices connected to the plurality of signal splitters, such that a wavelength selective device is disposed at each output of each signal splitter and operates at different wavelengths to manipulate optical data signals embodied in the optical multiplexed signal; and a plurality of signal combiners connected to the plurality of wavelength selective devices, such that each signal combiner is adapted to receive an optical multiplexed signal via a wavelength selective device from each of the plurality of signal splitters, and operates to pass the optical multiplexed signal to an outlet port of the switch, thereby routing optical data signals amongst the outlet ports of the switch.